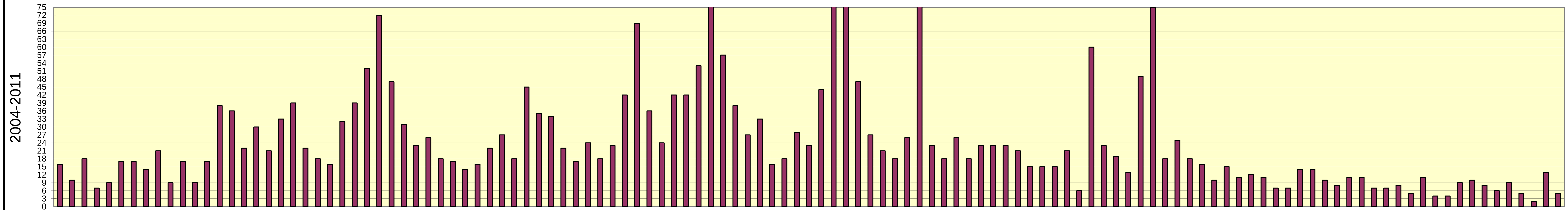
Seasonal Fire Activity Timelines for PSA NW04 - Large Fire = 100+ acres



Date	6/15	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
Fires	16	10	18	7	9	17	17	14	21	9	17	9	17	38	36	22
Large fires																

Date	7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19	7/20	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	7/31
Fires	30	21	33	39	22	18	16	32	39	52	72	47	31	23	26	18	17	14	16	22	27	18	45	35	34	22	17	24	18	23	42
Large fires	1										1		2							1	2	1				1	1	1			

Date	8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21	8/22	8/23	8/24	8/25	8/26	8/27	8/28	8/29	8/30	8/31
Fires	69	36	24	42	42	53	##	57	38	27	33	16	18	28	23	44	##	##	47	27	21	18	26	##	23	18	26	18	23	23	23
Large fires	1			1									2			1	2	2	1	1			1		1						

Date	9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8	9/9	9/10	9/11	9/12	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20	9/21	9/22	9/23	9/24	9/25	9/26	9/27	9/28	9/29	9/30
Fires	21	15	15	15	21	6	60	23	19	13	49	75	18	25	18	16	10	15	11	12	11	7	7	14	14	10	8	11	11	7
Large fires					1		2	2				2					1			1	1			1			1			

Date	10/1	10/2	10/3	10/4	10/5	10/6	10/7	10/8	10/9	10/10	10/11	10/12	10/13	10/14	10/15
Fires	7	8	5	11	4	4	9	10	8	6	9	5	2	13	5
Large fires															

Total Fires = 3178
Large Fires = 36

NW04 – Southwest Oregon

Season ending date estimates for Southwest Oregon utilized the Predictive Services 7-day Significant Fire Potential Product. Given that the product determines the probability of a significant fire occurring, based on historical dryness levels and historic fire occurrence, the analysis results assume end of season when the product observed "green" (1% probability of a significant fire event) for three or more consecutive days, and where periods of green were never separated by more than a single yellow and or brown day (6 to 15% probability of a significant event).

Large fire definition per NWCC predictive services for PSA NW02 is 100 acres or more. The earliest large fire occurred July 1, 2007 and the latest large fire occurred September 27, 2007.

A TERM file was generated using FireFamily Plus *v.* 4.1. The season was set **May 15 to October 15** for the **years 1994-2012** using the same rationale as above produced these results:

25% of the seasons end on or before September 12
50% of the seasons end on or before September 24
75% of the seasons end on or before October 5
90% of the seasons end on or before October 13
99% of the seasons end on or before October 25

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FireFamily Plus Term Report

Station: SIG - W4
Term Name: NW04
Season Start Day: 5\15
Data Years: 1994 - 2012
Alpha: 8.958577
Beta: 0.007297
R-Squared: 0.891737

Comment:

Term Dates
Year      Day     #Days    Comment
1994      9/27     135
1996      8/16      94
1997      8/16      93
1998      9/ 8     116
1999     10/ 4     142
2000      9/27     136
2001     10/ 5     143
2002      9/28     136
2003      9/28     136
2004      8/13      91
2005      8/28     105
2006     10/ 1     139
2007      9/12     120
2008     10/ 2     141
2009      9/29     137
2010     10/ 3     141
2011      9/25     133
2012     10/12     151

Key Probabilities
Probability      Date
 0.25           September 12
 0.50           September 24
 0.75           October 05
 0.90           October 13
 0.99           October 25

FF+4.1 Beta 05/21/2013-12:34
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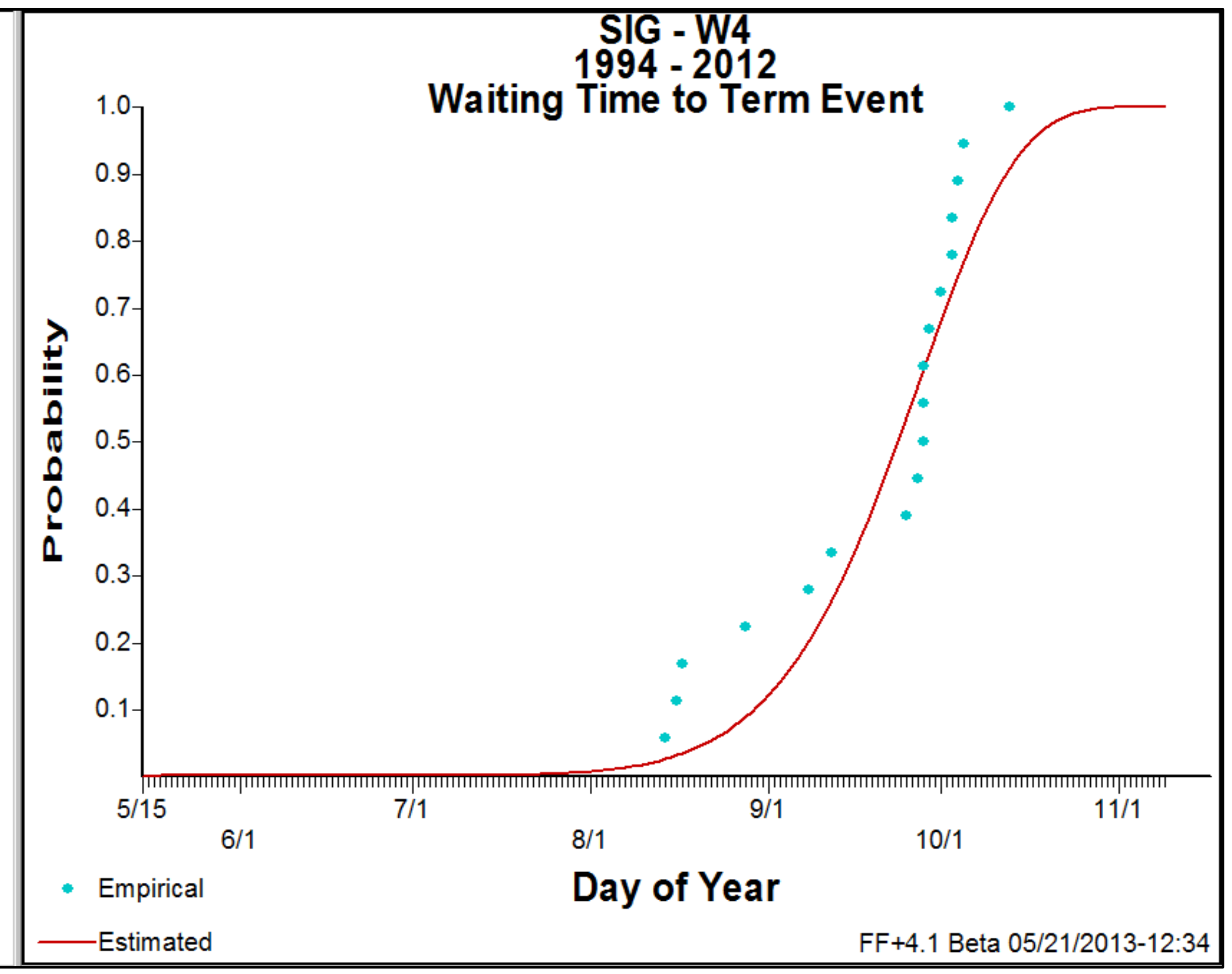

<u>PSA NW04 (W4)</u>

This area represents southwest Oregon. Average PSA fuel moistures are determined by the average of the Key RAWS in the zone.

Key RAWS: Pebble, Emigrant, Zim, Buckhorn Springs, Evans Creek, Provolt, Calvert Peak, Quail Prairie, Red Mound

Each RAWS receives equal weighting for NFDRS Index calculations.
Used to determine the DL: 100-HR FM
"Large Fire Day" = A day with an occurrence of at least one 100+ acre fire

"F100 threshold values used for DL determination
Based on June-September data (2000-2011)

DL	F100 Threshold	% of all fire season days	% of all large fire days	Conditional Probability of a large fire
Green (moist)	≥ 12	57%	11%	1%
Yellow (dry)	10 – 11	38%	64%	6%
Brown (very dry)	≤ 9	5%	24%	15%

* Conditional Probability: Assumes at least 1 ignition

Specifics for PSA NW04

Burn Environment
NWCC's assumption is that large fires result as a consequence of a "critical" burn environment whereas, dry fuels, wind and instability and/or mass ignitions that overwhelm IA capability come into alignment.
A large fire for NW04 is 100 acres (5% of the fires meet this criteria).

Statistically, the best fire danger indice that has has a good delineation of the various dryness levels is 100 hr fuel moisture. (See table for threshold and probabilities).

The burn environment alone (independent of mass ignition event) where fuels, wind and or instability reach critical values only occurs ~2% fo the time. However, ERC value alone is a poor indicator of "large" vs. "small" fire days.